

A CASE STUDY: BUILD VS. BUY – AGI TECHNOLOGY SELECTED FOLLOWING A CMMI-REQUIRED DECISION ANALYSIS RESOLUTION PROCESS FOR A SPACE SURVEILLANCE SYSTEM

Solution | DoD Space

Challenge:

A CMMI-certified defense contractor needed to determine whether to build or buy software to serve as the foundation for a complex space surveillance system for a government customer.

Solution:

Conducted a formal evaluation of AGI's off-the-shelf STK Engine software against development costs, schedule and risks.

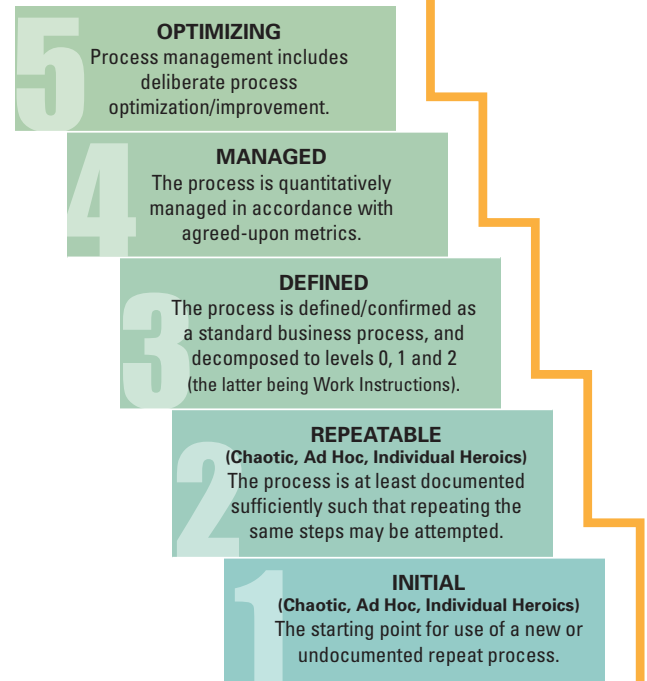
Results:

Through a formal engineering review process, AGI received a positive decision to be integrated into a solution vs. developing similar capabilities from scratch.

A defense contractor with expertise in complex military systems was tasked by its government customer to develop a component of a space surveillance system. As a Capability Maturity Model Integration (CMMI)-certified software development organization, the contractor was required to perform a build vs. buy analysis in what is known as a Decision Analysis Resolution (DAR). The Capability Maturity Model was originally developed as a tool for objectively assessing the ability of government contractors' processes to perform a contracted software project. The DAR is a level of the CMMI by which technology and the cost of implementation are evaluated to decrease technical and programmatic risk to the overall program. The results of the DAR were presented to the customer, in this case the U. S. government, who agreed with the DAR findings to purchase AGI's off-the-shelf software instead of building similar software functionality.

The goal of the DAR is to analyze possible decisions using a formal process that evaluates identified alternatives against established criteria. A DAR process is typically undertaken when a key design decision on alternative methods or products needs to be made to successfully complete a project. Usually the design decision will encompass significant complexity or work, such that the result of this decision will affect the overall project success. The DAR process is used to formally quantify the decision-making process, thereby reducing project risk.

CMMI Levels



According to the Software Engineering Institute:

"Predictability, effectiveness, and control of an organization's software processes are believed to improve as the organization moves up these five levels." Through the use of the rigorous CMMI process, AGI's off-the-shelf STK Engine was deemed capable of meeting requirements for a U.S. government space surveillance system.

Upon successful determination that AGI technology would provide the best solution and mitigate overall risk to the program, the contractor proceeded to integrate AGI's STK Engine software into the space surveillance system. While still underway, feedback on the decision and subsequent integration activities has been extremely positive. Through the use of the rigorous CMMI process, AGI's off-the-shelf STK Engine was deemed capable of meeting this project's requirements.

By leveraging proven technology and the widely respected CMMI process, the defense contractor was able to deliver a low-risk, low-cost solution to its customer.



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